

quill
FALL 2019

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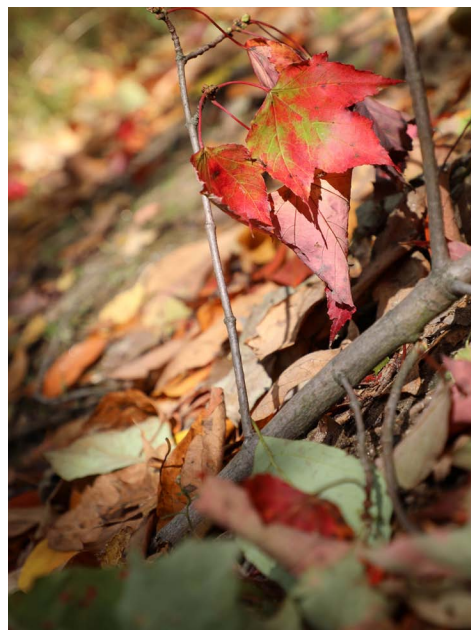
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FROM THE SCHUYLKILL CENTER FOR ENVIRONMENTAL EDUCATION | FALL 2019

on nature preschool

CHILDREN LEARN BETTER OUTDOORS

By Kristina Garcia, Director of Communications

THE CHILDREN are quick to spot feathery white flowers shooting above the forest floor, an identification quickly confirmed with a smell test—yep, that's garlic mustard. Students rush to gather this delicious invasive plant, working in teams with guidance from three experienced teachers. Garlic mustard rewards gathering. Its shallow root system is easy for tiny hands to unearth and its leaves are quickly made into a delicious edible: garlic mustard pesto. Through this process, children practice counting, measuring, early literacy, and turn-taking while using their sense of sight, taste, touch, and smell.

This is Nature Preschool at the Schuylkill Center, an immersive and innovative experience for children ages three through six. Here, young learners hike in the woods, set up tents, investigate animal tracks, make snowpeople, go sledding, and collect leaves. Nature is where our students go to learn about themselves and how to interact with others, building a strong foundation for a lifetime of kindness and intellectual curiosity.

"Nature Preschool is the first of its kind in Pennsylvania and every new experience and challenge is a learning journey," says Sandi Vincenti, Director of Early Childhood Education. "I marvel at the relationships and connections children

form out in the natural world and am humbled by the work of children through discovery, inquiry, and play."

Throughout the year, children develop attachments not only to one another but to favorite spots like Pine Grove and Polliwog Pond, watching them change with the seasons. When does the water level rise? When does it freeze over? What can we see in the snow? What are the first plants we see as the snow melts? This attachment to nature helps to foster a sense of security and peace. While time in nature is increasingly deprioritized in our hectic society, this disconnection is coming at a price. Richard Louv, author of *Last Child in the Woods*, describes "nature-deficit disorder" as "the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illness." A return to nature restores children's focus and relieves stress.

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director's cut

HISTORY OF THE MEIGS AWARD

ON NOVEMBER 7, the Schuylkill Center gives its 14th annual Henry Meigs Environmental Leadership Award to two deserving Philadelphians, Mary Jane Stretch and Leah Stallings (the latter pictured at left). First Mary Jane and subsequently her daughter Leah have directed the Aark Wildlife Rehabilitation Center in Bucks County, one of the first and one of the largest in the state. In fact, Mary Jane was among the first cohort to receive a wildlife rehabilitation license in Pennsylvania.

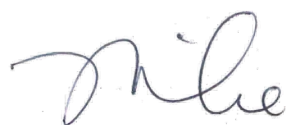
Stretch and Stallings—the first wildlife rehabbers to receive the Meigs Award—join a list of 15 other prominent Philadelphia-area environmental heroes, honored for their career leading in the greening of the region. Former Governor Ed Rendell was honored for his statewide Growing Greener program; Kay Sykora for her greening efforts here in Roxborough-Manayunk. Bob Mercer directed the Silver Lake Nature Center in Bristol for more than 40 years and mentored hundreds of educators like me; Carole Williams-Green founded a nature center in West Philadelphia's Cobbs Creek neighborhood, a daunting task that took decades to accomplish.

The award is named for Henry Meigs, one of our center's founders and its longest serving trustee. Residing on Spring Lane on our western flank in

the early 1960s, Henry worked with Audubon to study our site as a possible urban nature center. When concluding that it was possible, Henry worked tirelessly alongside founding executive director Dick James to make it happen, and stayed on our board from our 1965 inception until his death in 2005, a remarkable 40-year run that will never be equalled. His son Binney, a sculptor who also served as board president here from 2010–2013, will help present the award.

We invite you to join me and Binney in honoring Henry's astonishing memory, as well as to celebrate two keystones of wildlife rehabilitation in our state, the mother-daughter directors of the Aark.

The Meigs Award will take place on Thursday, November 7 at 7:00 pm. The event will begin with a presentation evolving into a town meeting about people and urban wildlife, featuring a panel that includes our own Director of Wildlife Rehabilitation, Rebecca Michelin. We hope you will join us.

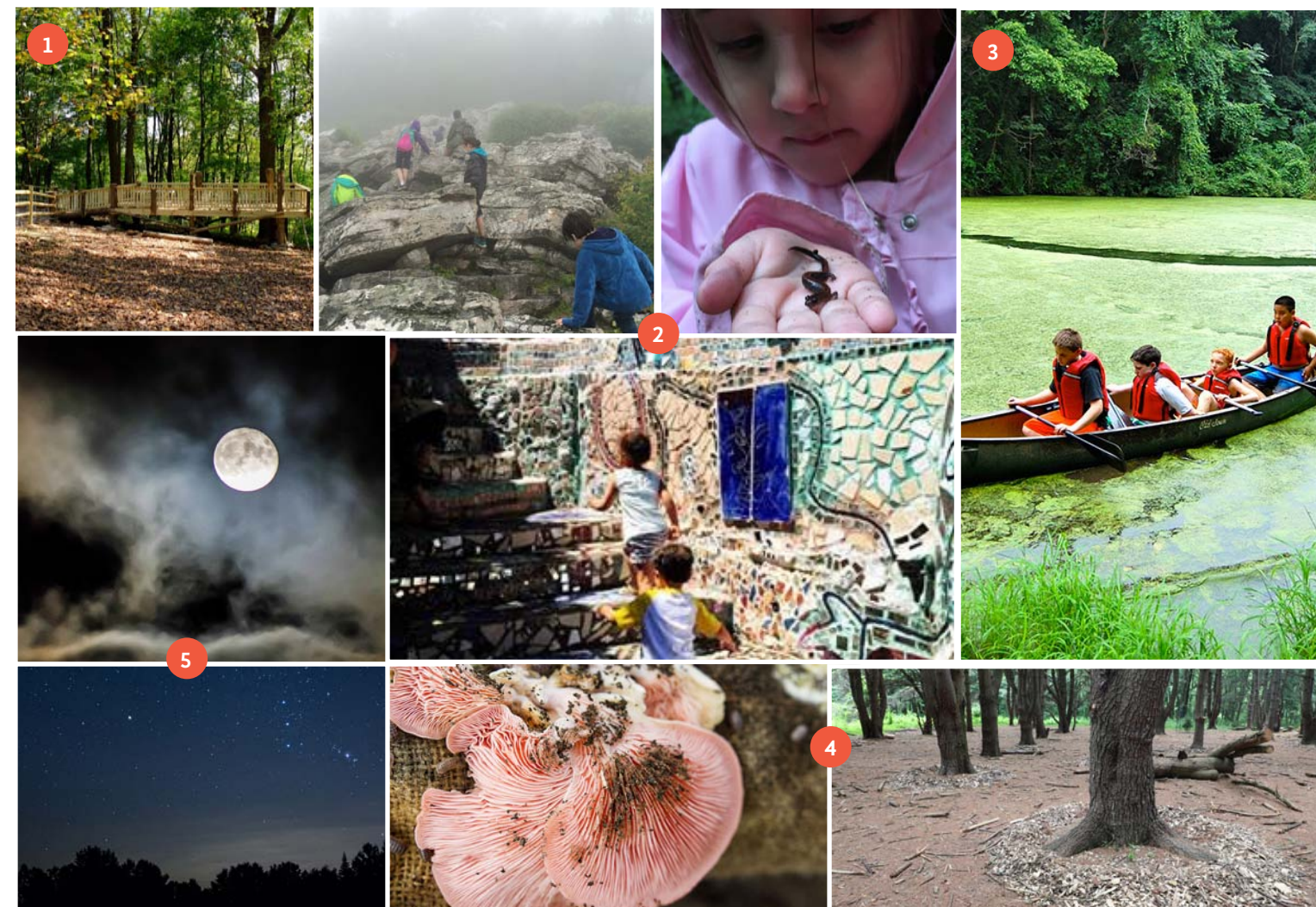


Mike Weilbacher, Executive Director
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the season in brief

HIGHLIGHTS FROM SUMMER 2019

- 1 We have a new addition to the Tall Trees Playscape: the **Phanatic Fort**. In 2018, **David Montgomery** pledged \$25,000 from the **Philadelphia Phillies** to the Schuylkill Center, which has been supplemented with donations from private individuals. The Fort will be constructed in phases, to be completed in 2022. Current visitors can explore a raised platform, held up with ash log columns, taken from dying ash trees at the Center after they were attacked by the emerald ash borer (appropriate, as baseball bats were originally carved from ash).
- 2 Many thanks to all the children, parents, and counselors who made **Summer Camp** at the Schuylkill Center another resounding success. This year, we discovered **toads and salamanders**, visited **Magic Gardens** to learn about trash and recycling, and explored **Hawk Mountain**.
- 3 We're launching a new **outdoor gear borrowing program** for Family members and above to check out **canoes, snowshoes, bird watching kits, hammocks**, and more during your visit. Members will receive more info this fall.
- 4 Notice anything extra-magical in **Pine Grove**? In a **LandLab** installation called **Fairy Rings**, artist **Jan Mun** added mulched circles around select trees, providing soil amendments containing mycorrhizal fungi and pink oyster mushroom spores. Over time, we will observe the benefits of the symbiotic relationships between trees and fungi.
- 5 The popular, sell-out **Shooting Stars & S'mores** expanded to two nights this past August. Our programming was also supplemented by an additional astronomy offering: seasonal moon hikes. Check out our **Winter Solstice Hike on December 21** and remember to reserve in advance—the limited tickets go quickly!



on nature preschool

CHILDREN LEARN BETTER OUTDOORS

CONTINUED FROM PAGE 1

Learning outdoors enables concentration and self-discipline, both tied to academic success later in life. Studies show that green space in schools serves as a resource for resilience in children. Unstructured play develops children’s ability to manage their emotions and interactions in facing challenges so that they can reach their full potential, mentally and physically.

“The natural world helps children navigate their surroundings,” says Emily Harkness, Assistant Director of Early Childhood Education, “whether through a peer relationship strengthened, a risk conquered, or a tough question answered. We can always look to the energy of nature to help us guide the children through these experiences.” Emily has been with the Schuylkill Center for three years and “it’s been really exciting to see the program grow. When I started here, we had three preschool classrooms. Now, we also offer a fully outdoor immersion preschool class, a state licensed Kindergarten, and toddler programs. I look forward to seeing what else we can accomplish and share in the years ahead.”

Our Nature Preschool is part of a growing trend of nature-oriented, place-based education. David Sobel, an education professor at Antioch University, has been championing this movement for decades, noting that children’s understanding of the world around them begins in their backyard. Christine Walinski, a parent who started enrolling her children in Nature Preschool at the program’s inception in 2013, finds environmental education has helped her children to become more intuitive and caring. “This past weekend we were camping

on friends’ wooded property,” she related. “There was a monarch that was probably already dealing with injury. One of the other kids found it and was handling it roughly, carelessly, and as if it was just an inanimate object. One of my boys came over and demanded she stop handling it like so. Knowing it was injured, he found a safe leaf for it away from people in a nearby bush. He knew it would most likely die, but still wanted it away from further harm. He knew the importance of even a tiny creature’s existence. This made me know that starting out learning and respecting the natural world is a key component to navigating through life in the least harmful way, with curiosity and wonder but also reverence for all life in nature. Nature Preschool has been a huge part of that for us, along with learning as a family out in nature. It is an exciting and proud moment when you catch your child owning that respect and teaching peers the same.”

With 340 acres of forested land in a major American city, the Schuylkill Center offers unique access to the natural world in an urban setting. With Nature Preschool, the Center is able to extend environmental education to the youngest members of our community and help them grow into engaged citizens, caring for one another and the world around them. Nature Preschool proudly accepts ELRC (The Early Learning Resource Center/ Pa Child Care Works Subsidy Program; formerly known as CCIS) state subsidy payments for low-income families. For more information please inquire at sandi@schuylkillcenter.org, 215.853.6781, contact your local ELRC office, or utilize the PA Compass system. 🐦

BOTTOM FROM LEFT TO RIGHT: CHILDREN AT PLAY IN FOUNDER’S GROVE; PICKING OUT PUMPKIN SEEDS AT FALL FEST; EXPLORING OWL TREE

KNOW A CHILD INTERESTED IN ATTENDING NATURE PRESCHOOL?

COME TO OUR OPEN HOUSE ON NOVEMBER 12 AT 6:00 PM.

TAKE A PEEK INSIDE OUR PRESCHOOL AND KINDERGARTEN CLASSROOMS, MEET THE TEACHERS, AND LEARN ABOUT THE CURRICULUM, PHILOSOPHY, AND VALUES THAT GUIDE THIS UNIQUE PROGRAM. CHILDREN ARE WELCOME TO ATTEND.



from the clinic

WINDOW STRIKES CONTINUE TO BE A MAJOR THREAT

By Rebecca Michelin, Director of Wildlife Rehabilitation

YOU MAY HAVE HEARD THE DEVASTATING NEWS: a study published in *Science* reported that the total breeding bird population in Canada and the continental United States has dropped by 29% since 1970.

While there are numerous factors contributing to this decline, human-made alterations to the landscape have certainly played a significant role and we see the results of this clearly at the Wildlife Clinic at the Schuylkill Center. Since mid-August, the Clinic has treated nearly two dozen birds, from mourning doves and woodpeckers to warblers and vireos, all suffering injuries as a result of collisions with buildings and windows.

The number of window collisions increases drastically in late summer and early fall as many migratory birds make their way down the East Coast from their summer breeding grounds. Exhausted from long miles of travel, birds looking for a safe place to roost can become confused and disoriented by brightly lit buildings, complex city skylines, and clear glass windows. Fledgling and juvenile birds who are just learning to fly are also susceptible to striking windows, as they have no prior experience with the many dangers they face.

Glass is just as invisible to humans as it is to birds, but humans have learned to recognize visual cues indicating the presence of glass, such as certain shapes, frames, and even dirt or smudges. This is why young children can often be seen bumping into pane glass doors—they haven’t yet recognized those cues. However, these symbols aren’t helpful to birds, who don’t recognize glass as a barrier. For many birds, the first encounter with glass is often fatal, as they collide head first at full flight speed. If the impact is not immediately deadly, birds will often suffer severe head and

spinal trauma or fractures of the neck and shoulders, injuries which they may not be able to recover from even with treatment.

If you see an adult bird sitting on the ground or sidewalk and they do not move when approached, they may have struck a window and be stunned or injured. If the bird appears to be having trouble breathing (gasping, visible chest movement), has a wing or leg held out from the body, is squinting their eyes, or has other visible signs of injury, the bird should be brought to a rehabilitation facility immediately. You can use a small towel or t-shirt to drop over the bird and gently place them in a cardboard box or other secure container. Do not offer food or water, just keep the bird warm, covered, and away from loud noises or other stressors until they can be brought to the nearest rehabber.

Many times, injuries from a window collision may not be immediately visible. In some cases, the bird may appear fine and even be able to flutter a short distance. If in doubt, call the Wildlife Clinic hotline (215-482-7300 x option 2) or contain the bird as instructed above and bring them to the clinic. Rehabilitators are trained to look for signs of injury that may not be obvious, and we can help ensure the birds are fully recovered before continuing on their migration journey. 🐦



ABOVE: A JUVENILE CHESTNUT-SIDED WARBLER ADMITTED TO THE CLINIC WITH A FRACTURED SHOULDER AFTER A WINDOW STRIKE

HOW TO HELP:

- PLACE MESH OR SCREEN OVER WINDOWS TO INCREASE VISIBILITY AND SERVE AS A CUSHION IF BIRDS HIT THE GLASS
- USE REFLECTIVE TAPE OR PAINT MARKERS TO CREATE PATTERNS ON THE OUTSIDE OF GLASS IN HORIZONTAL LINES NO MORE THAN 2” APART OR VERTICAL LINES A MAXIMUM OF 4” APART
- APPLY UV FILM OR DECALS TO WINDOWS AND REFLECTIVE SURFACES, WHICH ARE NEARLY INVISIBLE TO HUMANS BUT CLEARLY SEEN BY BIRDS

we all fall down

ARTISTS RESPOND TO THE EMERALD ASH BORER

By Christina Catanese, Director of Environmental Art

SINCE THE EMERALD ASH BORER arrived in the United States in the midwest in 2002, it rapidly decimated many forests, resulting in the death of millions of ash trees. The emerald ash borer and its distinctive D-shaped bore hole was first seen at the Schuylkill Center in the summer of 2018. With a 99% kill rate, it will sweep through our area like a wave and wipe out all of Philadelphia's ash trees in the next 5–10 years. With some areas of the Schuylkill Center canopy composed of as much as 50% ash trees, the beetle will have a significant impact on our ecosystem. *We All Fall Down: Artists Respond to the Emerald Ash Borer* takes this unfortunate opportunity to make the impact of this invasive insect visible and understandable. The exhibition will be on view at the Schuylkill Center through November 30.

Wood from impacted ash trees was made available to six artists (Nancy Agati, Laurie Beck Peterson, Anthony Heinz May, John Kuiphoff, Brian Skalaski, and Janine Wang) to create new art works for the Schuylkill Center's gallery and trails. These six artists were chosen from an open call for proposals and used the ash wood in a wide variety of ways, including sculpture, photo transfer, data visualization, site-specific sculpture, woodturning, and steambending. They touch on various aspects of the ash borer crisis, including how ash wood has been historically used by people, ash borer and ash tree biology, and the spread and impact of invasive species.

Artists have a key role to play in spreading awareness about the unfolding ecological crises, as well as helping us work through our responses to the loss of biodiversity in nature, both practically and emotionally. It's critical that our environmental art program is reacting to emerging challenges in the world, especially those on our property. When the ash borer arrived on our site, we initiated this project as a collaboration between the artists creating new works from trees that grew on the Schuylkill Center's land and our staff who are working so hard to respond to this issue.

We look forward to sharing these new works that are so rooted in the Schuylkill Center's ecosystem.



ABOVE: "RED DOTS, YELLOW TAGS" BY LAURIE BECK PETERSON

front entrance

BUILDING UPDATES TO ENHANCE AESTHETICS, WATER MANAGEMENT

By Mike Weilbacher, Executive Director

OUR FRONT ENTRANCE IS GETTING A RADICAL MAKEOVER. The design-build firm Think Green is putting together a reimagined space, one that includes new walkways and seating areas, as well as a new stormwater system, enhanced lighting, and streamlined wheelchair access. The project is a gift of the Advisory Board, whose donations have been matched by Julie Spahr, one of the advisors.

We're thrilled at Julie's generosity and her decades of dedication to our Center and thankful to the entire Advisory Board. In addition, a grant from the Widener Foundation supports the accessibility of the project. We hope you enjoy the new entrance when next you visit.



the emerald ash borer

OUR MOST DESTRUCTIVE INSECT

By Andrew Kirkpatrick, Manager of Land Stewardship

THE MIGHTY ASH, wood of baseball bats, axe handles, and even wizarding wands, is quickly disappearing from our streets, yards, parks, and forests, brought down by a bug that measures less than an inch in length.

The perpetrator of the ash trees' demise is a wood-boring beetle called the emerald ash borer, or EAB. Native to Asia and accidentally introduced to the United States in wood packing material in the 1990s, EAB was first positively identified in the Detroit area in 2002.

The emerald ash borer belongs to a family of beetles known for their glossy metallic bodies, long coveted in some cultures for jewelry. While many of them bore into dead wood or stressed trees in Asia, they are not a general threat in their native range. In North America, however, they have run amok, attacking the wood of healthy green, black, and white ash trees.

While the adult only lives a few weeks, feeding on the margins of ash leaves, it is the larvae that cause the most harm, feeding under the tree's bark on the interior tissue the trees use to transport nutrients and water from roots to limbs and leaves to the rest of the tree. Disrupting this critical part of the anatomy kills the tree.

At home in its native range, the beetle's populations have been kept in check because Asian ash tree species have a higher tannin content, which is less palatable to the adults. In addition, native predators feast on the adults and parasitic wasps lay eggs in their bodies. But here, with no parasitic wasps that recognize their ability to use them and birds not yet eating them, the beetle has been free to destroy our trees. To make matters worse, we inadvertently spread the insect while shipping trees and moving firewood. As of this fall, 35 states plus five Canadian provinces have reported the beetle's presence.

EAB's ecological impact is tremendous, as our forests are comprised of many green and white ash trees. When these trees die, wide gaps in the canopy open up and invasive species are provided with the light they need to thrive and outcompete natives. Some 282 arthropod species—a wide variety of ants, bees, and spiders—feed on ash trees, and at least 43 species of native wood-boring and bark beetles feed solely on ash. All of these are in peril of disappearing.

From an economic standpoint, EAB is the most destructive forest insect to invade the United States. It has taken a toll

on nurseries, saw mills, and logging companies that rely on ash wood as a commercial product. But it has also been costly for private landowners, municipalities, and state agencies that must deal with treating or removing ash trees from the landscape. Ash trees comprise more than 20% of municipal tree species and were widely planted in parks and as street trees. Specimen trees treated with insecticides need to be retreated every 2–3 years, which still may be cheaper than cutting them down or letting them die in place.



At the Schuylkill Center, we have been taking the ash tree situation seriously. According to Steve Goin, Director of Land and Facilities, "After hearing about the movement of the emerald ash borer over the last several years and bracing for its arrival, it still surprised me when I first discovered its exit hole on a declining ash tree on the property. The speed it tore through our half square mile of forest was devastating." In an effort to be proactive, the Center has used grant money from the Tree Vitalize Watershed program to foster the establishment of other species over the last four years. To date, over 1,000 trees have been planted across four acres of the property.

We hope we are making wise choices, but the future is unpredictable and the road ahead will be a bumpy one, one without ashes—for a while.



TOP: ARTIST ANTHONY HEINZ MAY'S NEW ARTWORK, SEEN ALONG OUR DRIVEWAY, IS MADE FROM A WHITE ASH KILLED BY THE BORER.

BOTTOM: CLOSE UP OF THE EMERALD ASH BORER